



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/585,305

09/27/2006

Taro Suzuki

Q95395

2352

23373 7590 04/16/2008  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

KASTURI, SRIRAM

ART UNIT

PAPER NUMBER

4131

MAIL DATE

DELIVERY MODE

04/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/585,305	<b>Applicant(s)</b> SUZUKI ET AL.	
	<b>Examiner</b> SRIRAM KASTURI	<b>Art Unit</b> 4131	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/16/07, 9/27/06 and 7/6/06</u> .                             | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 1-20 are pending. Receipt and consideration of Applicants' response to the election of species requirement, submitted on 3-12-08 is acknowledged. Claims 1-20 are under consideration in the instant office action.

#### ***Specification***

The Examiner respectfully requests that Applicants amend the 1<sup>st</sup> line of the specification to disclose the parentage of the instant application, specifically, the parent PCT information.

#### ***Election/Restrictions***

Applicant's election of a hydrophilic polymer having an ether bond as the elected species in the reply filed on 3/12/08 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the species election requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1654

Applicant claims an allergen suppressing component (Claim 1), however, the metes / bounds of the “allergen suppressor component” are unclear, because this term is not defined and examples in page 5 lines 7-32 of specification are not definitions.

The remaining dependent claims are rejected for depending from a rejected claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

Art Unit: 1654

made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Applicants claim allergen suppressor and method of producing an allergen-suppression processed fiber comprising hydrophilic polymer with an ether bond.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over teachings of Nonomura et al (US 2005/0197319 A1).

1. Teachings of Nonomura et al clearly state use of cellulose ether or starch ether as an allergen inactivating agent (Title, abstract). Their cellulose ethers include methylcellulose, ethylcellulose etc (Page 2, para [0025]) and examples of their starch ethers include methyl starch, hydroxyethyl starch, ethyl starch etc (Page 2, para [0026]). Nonomura et al teach polysaccharide derivative with a typical partial structure of hydroxyethyl cellulose for its backbone (Page 2, para [0030] lines 1-3). This polysaccharide derivative has an excellent water solubility (Page 1, para [0023] lines 1-3) thereby these are hydrophilic polymers and the melting point of these cellulose ethers or starch ethers is above 40<sup>0</sup> C. They also claim that their polysaccharide derivative has a significant inactivation action against mite allergen, house dust, pollen allergen etc (Page 3, para [0044] lines 1-4). Though Nonomura et al are silent about use of combination of their hydrophilic polymers, as their individual polysaccharide derivative of cellulose ether has allergen inactivating property, it would have been obvious to use combination of two different cellulose ethers for example methylcellulose ether and ethylcellulose ether or ethylcellulose ether in combination with a starch ether like ethyl starch ether as claimed by applicant (Claim 6). Nonomura's teachings also include incorporation of their polysaccharide derivative into allergen inactivating agent at an amount of 0.001 to 30% by weight (Page 4, para [0055] lines 1-4) though

Art Unit: 1654

this is less than the range that applicant is claiming, that is the hydrophilic polymer is mixed in proportions of 40 to 1000 % with respect to 100 weight % of the allergen suppressing component (Claim 7 and 20).

In another embodiment Nonomura et al teach use of their inactivating agent impregnated in the sheet at 0.01 to 60 folds, and more preferably 0.1 to 10 folds of the sheet weight ( Page 4, para [0055] lines 4-6) they also indicate that the sheet member is impregnated with aqueous detergent containing polysaccharide derivative at an amount of 100 to 1000 % by weight in relation to the weight of the sheet (Page 4, para [0060] lines 1-4). For calculating the weight % of hydrophilic polymer to 100 weight % of the allergen inactivating agent in Nonomura's formulation, the assumption was made that the weight of sheet is 1 g so the weight of allergen inactivating agent and hydrophilic polymer (i.e. polysaccharide derivative) used will be 0.01 g to 60 g and 100 g to 1000 g, respectively, and the ratio of polysaccharide derivative to allergen inactivating agent was calculated by dividing 100 to 1000 g by 0.01 to 60 g and multiplying the result with 100 % which is 160 to  $10^7$  weight % and is within the range as applicant is claiming (Claims 7 and 20). Their teachings include using their allergen inactivating agent to impregnate on to a woven fabric such as gauze etc.,(Page 4, para[0053] lines 1-5). They also teach method of impregnating or spraying allergen inactivating agent to a sheet member of nonwoven fiber like polyester fiber. Impregnating of the agent on the fiber leads to insolubilization of the inactivating agent as claimed by applicant (Claim 9). The cellulose ethers of Nonomura et al are polyethers as claimed by applicants (Claims 13-15). Claims 16-20 have been addressed above.

Art Unit: 1654

Based on the teachings of Nonomura as set forth above in the instant office action it would have been obvious to prepare a hydrophilic polymer with an allergen suppressing component and to produce an allergen-suppression processed fiber as claimed by applicant.

Thus there is reasonable expectation of success based on these prior art teachings, because the prior art is fairly suggestive of the claimed allergen suppressor and method of producing an allergen suppressor fiber.

### **Conclusion**

Claims 1-20 are rejected. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRIRAM KASTURI whose telephone number is (571)270-5263. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres or Cecilia Tsang can be reached on 571-272-0867 or 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 1654

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sriram Kasturi/  
Examiner

/Cecilia Tsang/  
Supervisory Patent Examiner, Art Unit 4131